

Ref: Navy/Northrop Grumman - Bethpage  
ROD for OU-2, dated 03-28-2001

#### **D. Vinyl Chloride Contingency Plan**

The feasibility study does not include specific treatment for vinyl chloride. The RUCO site is upgradient of the Northrop Grumman Site and historically upgradient of the NWIRP Site due to large scale pumping by Northrop Grumman. The RUCO site discharged vinyl chloride, other chlorinated solvents and other organic compounds directly into the aquifer through on-site recharge basins. The USEPA has selected a remedy for the RUCO site vinyl chloride subplume. The existing ONCT system was not designed to treat vinyl chloride, a VOC that requires unique methods of treatment to meet stringent air discharge limits. Thus, the NYSDEC directed Northrop Grumman to develop a contingency treatment plan. The USEPA OU 3 ROD remedy includes enhanced natural attenuation and long term monitoring of the vinyl chloride subplume. The USEPA OU 3 ROD remedy recognizes the importance of preventing the vinyl chloride subplume from adversely affecting the performance and regulatory compliance of Northrop Grumman's groundwater remedial systems. Vinyl chloride was recently detected in Northrop production well GP-3, suggesting continued migration of the vinyl chloride subplume. Northrop Grumman has notified the USEPA and OXY that the vinyl chloride treatment contingency plan must now be invoked.

#### **E. Offsite GM 38 Area Remedy:**

This offsite groundwater extraction and treatment remedy would be located in the monitoring well GM38 area. This remedial technology would address elevated concentrations of total volatile organic compounds (TVOCs) in groundwater because deep groundwater at the GM-38 well area has been identified as an off-site "hotspot". This process option would be operated as a mass removal option to prevent further degradation of the aquifer. The modeling data from the OU 2 Groundwater FS indicates 7,000 pounds of the contaminant mass could be removed at this location.

Capital Cost:	\$ 4,390,000
Annual O&M Cost:	\$ 220,000
Present Worth:	\$ 6,673,000

#### **F. Northrop Grumman and the Department of the Navy Implementation of "Non-Detect" Policy for Affected Public Water Supplies:**

The State of New York, under its State Superfund Program, must ensure that all remedies selected for the remediation of inactive hazardous waste sites are protective of public health and the environment. With respect to the protection of drinking water supplies, the NYSDOH has promulgated Maximum Contaminant Levels (MCLs) for drinking water contaminants in Part 5 of the State Sanitary Code (10 NYCRR Part 5). For the most part, the respective MCLs for the VOC contaminants associated with the Northrop Grumman and Navy sites are 5 micrograms per liter (ug/L or parts per billion (ppb) for water).

→ Many Water Districts in the vicinity of the OU 2 regional groundwater contaminant plume have policies of providing their consumers with drinking water that contains no detectable concentrations of VOC contaminants. This is sometimes known as a "zero tolerance policy" with respect to VOCs. Northrop Grumman and the Department of the Navy have agreed to establish a goal for any given wellhead treatment or comparable alternative measures for affected drinking water supplies which will provide water that is

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non-detect using USEPA Method 502.2 to a detection limit of 0.5 micrograms per liter (ug/l) with respect to VOCs for site related contamination as cited in the 2001 Water Quality Monitoring Requirements for Nassau County Public Water Systems. Additional costs to implement this policy relative to the Alternatives considered in the OU 2 FS, if any, fall within the plus fifty and minus thirty percent of CERCLA cost requirements, and therefore will not significantly change the cost estimates for Alternatives 2 through 8.

The Bethpage Water District has a policy that only non-detect water be provided with their treatment system. As of the date of this ROD, Northrop Grumman through its agreement with the Bethpage Water District has reimbursed the District for Plants 4 and 6 and the Department of the Navy has reimbursed BWD for Plant 5 with such treatment technology. It is anticipated that Northrop Grumman and the Department of the Navy will enter into future agreements to implement this policy, as detailed in bullet 9 of section 8 of this ROD, with all water districts affected by site-related contamination.

**Alternative 1: No Further Action, A, B, C and D above:** This Alternative is the baseline Alternative to which the other alternatives will be compared. Under this Alternative, no additional remedial actions would be incorporated into the existing on-site groundwater IRM which has been installed and is now operating. This Alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment than that already provided. Under this Alternative, no additional remedial actions would be taken and the existing on-site groundwater IRM which has been installed and is now operating would continue to be operated over the next 30 years.

In order to maintain hydraulic containment of the groundwater plume(s), production well GP-1 has been included in the ONCT pump and treatment system design. The GP 1 water would be treated at the IRM treatment system located to the north of Plant 2 and discharged to recharge basins to the west of Plant 2. The ONCT wells are treated by a separate air stripper. The water would be recharged into the southern recharge basins located adjacent to Plant 1.

Capital Cost:	\$ 3,670,000
O&M Cost:	\$ 1,480,000
Present Worth:	\$26,700,000

**Alternative 2: A, B, C, D and F above, and HN-24 Area Treatment:**

Alternative 2 would add treatment of the HN-24 area on the Navy Plant 3 property. Treatment at the HN-24 area would consist of the use of reactive iron powder injected into the impacted groundwater through a series of injection wells. After injection the reactive iron powder would become immobilized within the soil pore space and begin to react with the contaminants of concern (COCs).

Capital Cost:	\$ 4,390,000
O&M Cost:	\$ 1,506,000
Present Worth:	\$ 28,830,000